

Big Pedal 2021

Lichen detective



Discover more about lichens and what they can tell us about the air quality around us.

What are lichen?

They are grey, green or yellow plant-like organisms that grow on rocks, walls and trees.

Lichen can show us how clean or polluted the air we breathe is. This is because they are very sensitive to changes in their environment.

[Watch the video](#) and [download the guide](#) to discover more.



What you'll need:

Pen and paper

Download the [Lichen ID Guide](#)

Instructions

1. Download the [Lichen Identification Guide](#)
2. [Watch the video](#) and learn about lichen species and your local air quality.
3. Test your knowledge with the quick quiz below.
4. Then head out with your ID guide and become a Lichen detective!



Lichen quiz

Fill in the missing words.

Lichen are made up of two tiny things called **o** _____ which benefit from living and working closely together.

F _____ give the lichen its shape and **a** _____ give the lichen the food it needs to survive.

Lichen absorb nutrients from the surrounding air through **p** _____.

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Become a lichen detective in your area

Lichen are found in many places all over the UK and around world. They come in many different shapes and colours.

Scientists study lichen to understand air quality because some species survive where levels of nitrogen dioxide (NO₂) are high, and others where NO₂ is low.

NO₂ is a harmful gas produced by burning fossil fuels eg petrol for cars.

There are:

- **Nitrogen loving lichen:** grow well in areas with high levels of NO₂ like towns and busy roads.
- **Nitrogen sensitive lichen:** grow well in areas with low levels of NO₂ like forests and woods.

Think about the places where you would find nitrogen loving and nitrogen sensitive lichens.

Write down if you think the air may be clean or polluted.

Now it's time to look at your [ID Guide](#) and explore lichens close to home. Are they nitrogen loving or sensitive?

